IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of | Atty. Docket

ANTONIO COLMENAREZ ET AL. | US 020001

SERIAL NO.: | GROUP ART UNIT:

FILED: CONCURRENTLY | EXAMINER:

BACKGROUND-FOREGROUND SEGMENTATION USING PROBABILITY MODELS That CAN PROVIDE PIXEL DEPENDENCY AND INCREMENTAL TRAINING

Commissioner for Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

Prior to calculating the filing fee and examination, please amend the above-identified application as follows:

IN THE SPECIFICATION

Replace the paragraph on page 4, lines 16-18, with the following new paragraph:

FIGS. 3A and 3B show a flowchart of a method for training a system that performs background-foreground segmentation, in accordance with a preferred embodiment of the invention.

Replace the paragraph on page 15, lines 3-8, with the following new paragraph:

However, the training procedure described in FIGS. 3A and 3B pursues two issues of great relevance for the real-time implementation of the modeling techniques of the present invention: (1) the incremental training of the models, and (2) the automatic determination of the appropriate number of global states.

Replace the paragraph on page 15, lines 17-26, with the following new paragraph:

An exemplary training process is shown in FIGS. 3A and 3B. This exemplary training process comprises an incremental procedure in which an unlimited number of training samples can be passed to the model. Every time a new sample image is passed to the model (i.e., a new image I^t passed to the model in step 305), the process 300 first executes an expectation step (E-step, from the EM algorithm) determining the most likely global state ξ^* (step 310) and the most likely mixture-of-Gaussian mode, $\alpha_{x,y}$, of each pixel of the image (step 315). Note that these steps are similar to steps in the segmentation procedure process 200.

REMARKS

The specification has been amended on pages 4 and 15 to correct the identification of Figs. 3A and 3B.

When the Examiner takes this case up for examination, it is respectfully requested that this Preliminary Amendment be taken into consideration.

Respectfully submitted,

By ______________________
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Attorney
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APPENDIX

The paragraph on page 4, lines 16-18, is amended as follows:

FIGS. 3 ~~is~~A and 3B show a flowchart of a method for training a system that performs background-foreground segmentation, in accordance with a preferred embodiment of the invention.

The paragraph on page 15, lines 3-8, is amended as follows:

However, the training procedure described in FIGS. 3A and 3B pursues two issues of great relevance for the real-time implementation of the modeling techniques of the present invention: (1) the incremental training of the models, and (2) the automatic determination of the appropriate number of global states.

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and the most likely mixture-of-Gaussian mode, $\alpha_{x,y}$, of each pixel of the image (step 315). Note that these steps are similar to steps in the segmentation procedure process 200.